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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANK JORDENS,
JURGEN SALOMON,
GERHARD SCHMIDMAYER,
and BERNHARD WALTER

Appeal 2009-003630
Application 10/824,233
Technology Center 1700

Decided: August 12, 2009

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
TERRY J. OWENS, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 13-17, 19-25, 27-30, and 32-38. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6. Claims 13 and 37 are illustrative:

13. A cooking, roasting, baking or grilling device having a substrate with a self-cleaning coating thereon, said coating comprising:

a plurality of particles having first pores therein, wherein spaces between adjacent particles form second pores which allow for solids and liquids to enter therein; and

a binder for binding said particles together at contacts(sic, contact) points;

wherein said binder is a colloidal solution comprising one of an inorganic polymer and an inorganic sol, wherein said colloidal solution is formed with at least one SiO_2 , TiO_2 , Al_2O_3 , ZrO_2 , SiC , Si_3N_4 , and B_2O_3 .

37. A substrate with a self-cleaning coating thereon, said coating comprising:

a plurality of particles having first pores therein, the particles comprising at least one of a metal oxide, a carbide, and a nitride, wherein spaces between adjacent particles form second pores which are larger than the first pores such that the first pores prevent a solid or liquid from entering therein and the second pores allow for solids and liquid to enter therein; and

a binder for binding said particles together at contacts(sic, contact) points, wherein said binder is formed with at least one of a metal oxide, a carbide, and a nitride.

The Examiner relies upon the following references in the rejection of the appealed claims:

Chay	US 3,888,790	Jun. 10, 1975
Stiles	US 3,993,597	Nov. 23, 1976
Watanabe	US 5,051,185	Sep. 24, 1991
Hoke	US 6,517,899 B1	Feb. 11, 2003

Appellants' claimed invention is directed to a cooking device having a self-cleaning coating thereon. The coating comprises a plurality of porous particles having spaces therebetween which form second pores that allow for

the entry of solids and liquids. The coating also comprises a colloidal solution that serves as a binder (independent claims 13 and 32). Also, the second pores formed between the particles are larger than the first pores of the particles which prevent a solid or liquid from entering therein (claim 37).

Appealed claims 13 and 33-38 stand rejected under 35 U.S.C. § 112, first paragraph, written description requirement. The appealed claims also stand rejected under prior art as follows:

(a) claims 13-17, 23-25, 28-30, and 33-37 under 35 U.S.C. § 102(b) over Chay or, in the alternative, under 35 U.S.C. § 103(a) over Chay in view of Hoke,

(b) claims 13-15, 17, 20-25, 32-36, and 38 under 35 U.S.C. § 102(b) over Stiles or, in the alternative, under 35 U.S.C. § 103(a) over Stiles in view of Watanabe,

(c) claims 19 and 27 under 35 U.S.C. § 102(b) over Chay or, in the alternative, under 35 U.S.C. § 103(a) over Chay in view of Hoke, and

(d) claims 16, 19, and 27-30 under 35 U.S.C. § 102(b) over Stiles or, in the alternative, under 35 U.S.C. § 103(a) over Stiles in view of Hoke and Watanabe.

We have thoroughly reviewed the respective positions advanced by the Appellants and the Examiner. In so doing, we find that the Examiner's rejections are not well-founded.

We consider first the Examiner's rejection of claims 13 and 33-38 under § 112, first paragraph. According to the Examiner, Appellants' original Specification does not provide written descriptive support for the claim language "solids and liquids." The Examiner submits that the

Specification disclosure of the term "soils" is limited to solids not the claimed "solids and liquids." However, the test is not whether the specification describes the claim language in *haec verba*, but whether the specification reasonably conveys to one of ordinary skill in the art that the applicant had within his/her possession the claimed subject matter at the time of filing the application. *In re Edwards*, 568 F.2d 1349, 1355 (CCPA 1978). In the present case, we are satisfied that Appellants' description of pores that are large enough to allow entry of soils also reasonably conveys that the pores are sufficiently large to allow the entry of liquids. The Examiner has not explained how pores which allow the entry of soils would somehow not allow the entry of liquids.

We now consider the prior art rejections of independent claims 13 and 32, and claims dependent thereon, which call for a binder being a colloidal solution. The § 102/§103 rejections of these claims must fail because the Examiner has not established that either Chay or Stiles describes a colloidal solution within the meaning of § 102, or renders obvious the use of a colloidal solution for a binder within the meaning of § 103. Indeed, the Examiner makes no finding that a binder comprising a colloidal solution is disclosed in the cited prior art, or would have been obvious to one of ordinary skill in the art in view of the applied prior art. The Examiner states that "[a]s to the limitation that the binder comprises an inorganic polymer or an inorganic sol, Chay teaches an amorphous binder phase comprising borosilicate glass, this disclosure is substantially similar to that of a glass polymer." (Ans. 6, third para.). This statement seems to indicate that the Examiner has misread the requirements of claims 13 and 32. Claim 13

recites "said binder is a colloidal solution comprising one of an inorganic polymer and an inorganic sol" (emphasis added). Hence, it is not enough for the Examiner to point to Chay's disclosure of a borosilicate glass, which is asserted to be a glass polymer. The Examiner must show that the borosilicate glass is part of a colloidal solution. This the Examiner has not done. Rather, the Examiner repeats the rationale that Chay teaches an amorphous binder of borosilicate glass (Ans. 11, second para.). We further note that independent claim 32 specifically recites "said inorganic binder includes an inorganic colloidal solution."

The Examiner also states that "Stiles is not relied upon to teach an inorganic polymer in the binder but does teach that the binder comprises silica" (Ans. 11, second para.). However, the Examiner does not explain how Stiles discloses a binder of a colloidal solution. Furthermore, the Examiner has not established how Hoke's disclosure of a silicone polymer emulsion would have rendered obvious using a colloidal solution for the binder of Stiles.

Turning to the prior art rejections of independent claims 37 and 38, claim 37 requires that the second pores formed between the adjacent particles are larger than the first pores of the particles, and claim 38 requires that a membrane of the binder surrounding the particles has a third pore size which is smaller than the second pore size between the particles. However, the Examiner has not established that the prior art teaches or suggests coating compositions having the claimed relative pore sizes. The Examiner submits that it would have been obvious for one of ordinary skill in the art to optimize the pore size of the particles and that "Stiles teaches that water is

absorbed in the coating . . . such that it would be obvious that the pores between the catalytic particles allow for solids and liquids to enter therein" (Ans. 7, last para.). However, the fact that the skilled artisan would have found it obvious to optimize pore size, and that the coatings of Chay and Stiles absorb water, does not speak to the claimed relative pore sizes. Significantly, Chay specifically teaches that "the porosity of the coatings is derived from the porosity of the catalytic ceramic particles themselves" (col. 8, last para.). Consequently, there is no factual basis for concluding that the particle pore sizes of Chay and Stiles are smaller than the pores of the membrane and the pores formed between the particles.

In conclusion, based on the foregoing, we are constrained to reverse the Examiner's rejections.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v)(2008).

REVERSED

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